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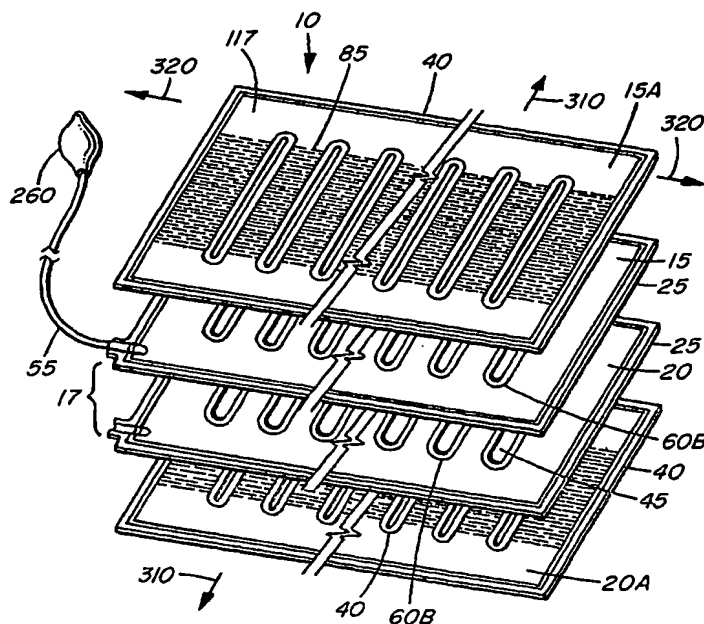
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[Continued on next page]

(54) Title: **FLUID OPERATED ACTUATORS AND PNEUMATIC UNLOADING ORTHOSES**



(57) Abstract: A flexible fluid filled actuator has an elastic bladder and a guide surrounding the bladder. The guide has asymmetrical elastic properties. When the bladder is inflated the guide directs the bladder to expand preferentially in a selected direction or directions. The actuator has utility in the traction and/or unloading of portions of the body. A fluid-filled traction apparatus is disclosed which has particular advantages in spinal unloading.

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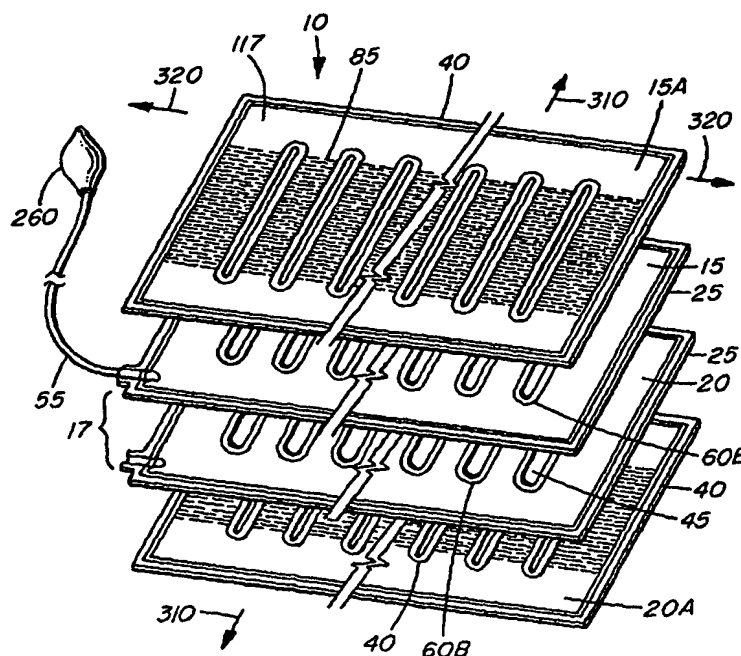
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